What is claimed is:

1. A method of producing particles comprising the steps of:
providing a load stock comprising:
a polymer, a wax and/or a lipid that is a solid at standard temperature and pressure; and
optionally, a biologically active substance;
contacting the load stock with a supercritical fluid to form a melt;
contacting the melt with a polar solvent to form an emulsion, the emulsion having a discontinuous phase comprising the melt and a continuous phase comprising the polar solvent; and
expanding the emulsion across a pressure drop to form solid particles comprising the load stock.

2. The method according to claim 1 wherein the emulsion is expanded through a heated nozzle.

3. The method according to claim 1 wherein the solid particles are collected in an expansion vessel.

4. The method according to claim 3 wherein a stream of inert gas flows through the expansion vessel to remove the expanded supercritical fluid.

5. The method according to claim 1 further comprising adjusting a rate of expansion of the emulsion across the pressure drop to control the morphology and/or size of the solid particles.

6. The method according to claim 1 wherein the supercritical fluid is carbon dioxide.

7. The method according to claim 1 wherein the polar solvent is selected from the group consisting of water and alcohol.

8. The method according to claim 1 wherein a surfactant is added to the polar solvent before the polar solvent is contacted with the melt.

9. A method of producing particles comprising the steps of:
providing a load stock comprising:
a polymer, a wax and/or a lipid that is a solid at standard temperature and pressure; and
optionally, a biologically active substance;
contacting the load stock with a supercritical fluid to form a melt;
contacting the melt with a polar solvent to form an emulsion, the emulsion having a discontinuous phase comprising the polar solvent and a continuous phase comprising the melt; and
expanding the emulsion across a pressure drop to form solid particles comprising the load stock.

10. The method according to claim 9 wherein the emulsion is expanded through a heated nozzle.

11. The method according to claim 9 wherein the solid particles are collected in an expansion vessel.

12. The method according to claim 11 wherein a stream of inert gas flows through the expansion vessel to remove the expanded supercritical fluid.

13. The method according to claim 9 further comprising adjusting a rate of expansion of the emulsion across the pressure drop to control the morphology and/or size of the solid particles.

14. The method according to claim 9 wherein the supercritical fluid is carbon dioxide.

15. The method according to claim 9 wherein the polar solvent is water.

16. The method according to claim 9 wherein a surfactant is added to the polar solvent before the polar solvent is contacted with the melt.

17. An apparatus for producing particles comprising:
a vessel for receiving a load stock comprising:
a polymer, a wax and/or a lipid that is a solid at standard temperature and pressure; and
optionally, a biologically active substance;
a supercritical fluid supply in fluid communication with the vessel;
means to selectively control the flow of supercritical fluid from the supercritical fluid supply to the vessel to transform the load stock to a melt;
a polar solvent supply in fluid communication with the vessel;
means to selectively control the flow of polar solvent from the polar solvent supply to the vessel;
means disposed within the vessel for forming an emulsion between the polar solvent and the melt;
an expansion chamber; and
a nozzle in fluid communication between the vessel and the expansion chamber.

18. The apparatus according to claim 17 wherein the nozzle has a plurality of apertures and the emulsification means is a high-speed shearing device.

19. A plurality of particles produced according to the method of claim 1.

20. A plurality of particles produced according to the method of claim 9.